

What is claimed is:

1. A magnetic recording apparatus comprising:

· a magnetic recording medium having a soft magnetic underlayer and a magnetic recording layer;

· a magnetic head including a recording head;

· a signal processing circuit for converting user data into a recording data sequence on a sector block by sector block basis; and

· a current driver for converting the recording data sequence into a recording current that is applied to the recording head, wherein

the signal processing circuit adds at the end of the recording data sequence for each sector block a repetition pattern of a minimum bit length for the particular block.

2. The magnetic recording apparatus according to claim 1, wherein the signal processing circuit adds a repetition pattern of the minimum bit length after a postamble portion that follows an ECC portion.

3. The magnetic recording apparatus according to claim 1, wherein the length of the minimum bit length added is four or more bits.

4. The magnetic recording apparatus according to claim 1, wherein the length of the minimum bit length added is one byte or more.

5. The magnetic recording apparatus according to claim 1, wherein the recording head is a single pole type head having a main pole and an auxiliary pole.

6. The magnetic recording apparatus according to claim 1, wherein a minimum track pitch in the apparatus is 250 nm or less.

7. A magnetic recording medium comprising a soft magnetic underlayer and a magnetic recording layer in which user data is recorded on a sector block by sector block basis, wherein, at the end of a recording data sequence in each sector block, a repetition pattern of a minimum bit length for the particular sector block is added.
8. The magnetic recording medium according to claim 7, wherein a repetition pattern of the minimum bit length is added after a postamble portion that follows an ECC portion in each sector block.
9. The magnetic recording medium according to claim 7, wherein the length of the minimum bit length is four or more bits.
10. A method of recording information on a magnetic recording medium comprising a soft magnetic underlayer and a magnetic recording layer using a recording head, the method comprising the steps of:
  - converting inputted user data into a recording data sequence;
  - adding a repetition pattern of a minimum bit length at the end of the recording data sequence;
  - converting the recording data sequence to which the repetition pattern of the minimum bit length is added at the end thereof into a recording current; and
  - driving the recording head with the recording current.
11. The method according to claim 10, wherein the length of the repetition pattern of the minimum bit length is four bits or more.